

551,864

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/088673 A1**

(51) International Patent Classification<sup>7</sup>: **H01B 1/12**,  
B01D 71/68

(21) International Application Number:  
PCT/GB2004/001375

(22) International Filing Date: 1 April 2004 (01.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0307606.4 2 April 2003 (02.04.2003) GB

(71) Applicant (for all designated States except US): **VIC-  
TREX MANUFACTURING LIMITED** [GB/GB];  
Vitrex Technology Centre, Hillhouse International,  
Thornton Cleveleys, Lancashire, FY5 4QD (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LOCKLEY, John**,  
Edward [GB/GB]; 1st Floor Flat, 10 Rossymoyne Road,  
Lancaster KA1 4SN (GB). **WILSON, Brian** [GB/GB]; 1  
White Lea, Cabus, Garstang, Lancashire PR3 1JG (GB).

(74) Agents: **NEILL, Alastair, William et al.**; Appleyard Lees,  
15 Clare Road, Halifax HX1 2HY (GB).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: ION-CONDUCTING POLYMERIC MATERIALS

(57) Abstract: A method of preparing a relatively stable solution and/or dispersion of an ion-conducting polymeric material, for example one comprising phenyl moieties, carbonyl and/or sulphone moieties and ether and/or thioether moieties, comprises: (a) selecting a solvent mixture comprising water and a first organic solvent in which mixture said ion-conducting polymeric material can be dissolved and/or dispersed; (b) dissolving and/or dispersing said ion-conducting polymeric material in said solvent mixture; and (c) removing greater than 80% of the total amount of said first organic solvent in said solvent mixture, thereby to leave a formulation comprising said ion-conducting polymeric material dissolved and/or dispersed in a solvent formulation comprising a major amount of water.

WO 2004/088673 A1